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CENTRAL INTELLIGENCE AGENCY

REPORT NO.

INFORMATION REPORT

CD NO.

DOE REVIEW COMPLETED, DEC 2001

COUNTRY Germany (Russian Zone)

DATE DISTR. 20 June 1951

SUBJECT Isotope Separation at the Institute of
Physics of the University of Halle

NO. OF PAGES 1

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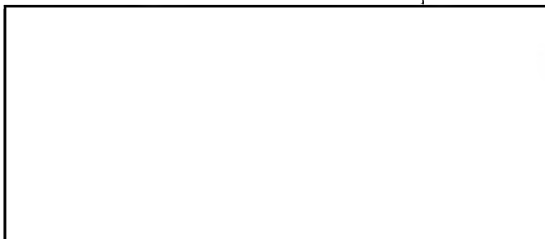
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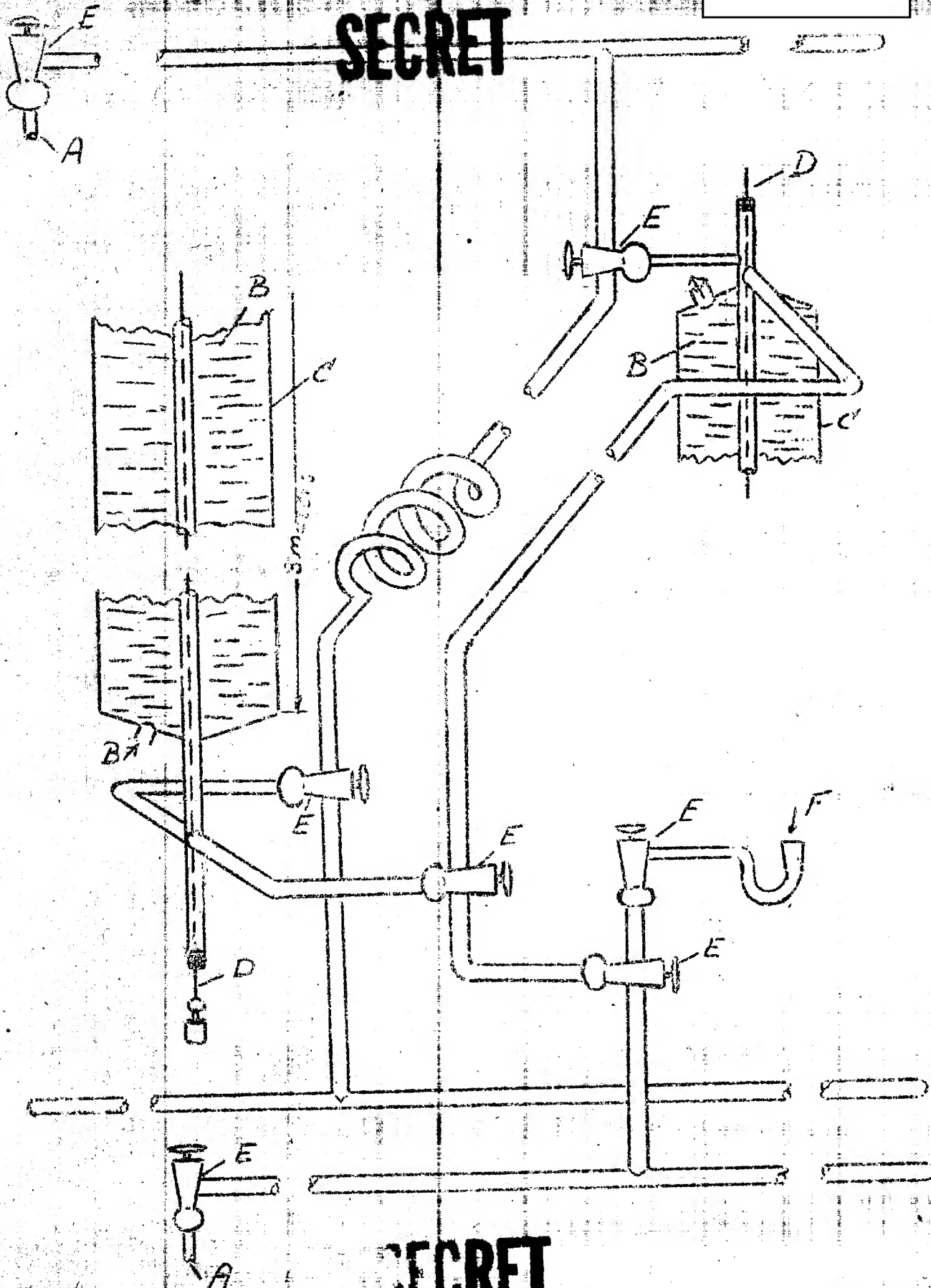
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10 May 1951

Activities in the Field of Isotope Separation at the Physical Institute of Halle University.

June 1950 to January 1951

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1. About June 1950 Halle (M 52/D 92) University was requested, probably by Karlshorst, to do research work in the field of isotope separation. This project was to be conducted on the basis of the thermal diffusion method developed by Clusius. Professor Moench, Chief of the Institute for Applied Physics, was in charge of the project. (1) Spectrally pure nitrogen was to be used for preliminary tests of the research equipment.
 2. The research equipment, composed of six sets of separating tubes and one set of purifying tubes, was completed in early January 1951. The apparatus was three meters high and 2 1/2 to 3 meters wide. It was made of glass and was mounted on the wall. (3) Plans for the construction of the set came from Harburg (L 51/G 74) University. (4) and (2)
 3. It was learned that a mass spectrograph is being constructed by the VEB Telefunken (Nationalized Plant) in Erfurt (M 51/J 36), the only enterprise in the Soviet Zone to produce mass spectrographs. (5) The device under construction was provided with double focusing lenses, like the mass spectrographs for isotope separation being used in the United States. Its construction had been completed to the extent that the adjustment of the apparatus was to be started in March 1951.

Field Comments

- (1) Professor Doctor Phil. Guenther Moench is Chief of the Institute for Applied Physics and of the Photograph Institute at Halle University.
- (2) The information was confirmed by an untested source, who also stated that most of the personnel engaged in this project were advanced students. All professors and their assistants ordered to work in this field feared that, in case of good results, they might be drafted to work in the U.S.S.R. on uranium isotope separation.
- (3) For a rough sketch of a set of separating tubes, see Annex. The primitive device reproduced on the attached sketch is believed to be a demonstration model to explain to students the basic functioning of thermal diffusions, rather than a complicated apparatus required for uranium isotope separation.

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This assumption is supported by the following facts: The spectrum telescope developed by Glusius requires long tubes with a small inside diameter. The reported length of three meters is, therefore, considered too small, and the diameter of 10-cm should probably read 10-mm. Furthermore, the process of separating uranium isotopes is performed with high pressure and not with low pressure, and glass tubes cannot be used with UF_6 (uranium hexafluoride).

- (4) This may refer to Professor Doctor Engineer Wilhelm Walcher, Chief of the Physical Institute at Marburg University. Professor Walcher worked in the field of isotope separation with mass spectrographs.
- (5) The former Telefunken Plant in Erfurt specialized on the production of tubes and recently started the production of small radio sets. It is believed improbable that this plant should have specialized on the manufacture of mass spectrographs for isotope separation. Therefore, the apparatus being constructed in Erfurt is believed to be a device for the photographic presentation of mass spectra, rather than a mass spectrograph. This photographic apparatus is provided with double focusing lenses and was developed by A.J. Dempster, J. Mattauch, and R. Herzog in 1931 and 1935.

1 Annex: 1 - one sketch on ditto.

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Annex

- 2 -

Legend:

- A. Pressure gauge, pressure 10^{-3} .
- B. Cooling water.
- C. Cooling jacket.
- D. Constantan heating wire, 0.5 mm in diameter.
- E. Regulating valves.
- F. Tapping point.

The tubes were made of glass and had diameter of about 10-cm. The sketch shows one of the six separating units. The seventh set was provided with a separating tube, 1½ meter long, for the elimination of impurities.

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German Democratic Republic

FDD Abstract

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PRODUCTION DIFFICULTIES AT AGIL PLANT (2 pp; [REDACTED])

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This report consists of a photostated letter, dated 16 February 1951, written by the VEB (People-Owned Enterprise) Agil Plant in Berlin-Oberschoenweide to the Ministry for Machine-Building in Berlin. The letter states that the plant is confronted with the necessity of curtailing the production of welding electrodes, and that it will probably have to effect a temporary reduction in personnel so as to avoid increasing the cost price of its products. The main reason for the anticipated curtailment is said to be the difficulty in procuring welding-core wire (Schweissskerndraehten). Although the plant took emergency steps and ordered this material from foreign countries (for example, Czechoslovakia) as well as domestic sources (Hennigsdorf Plant), these measures will not, according to the letter, result in full utilization of plant capacity, and, therefore, workers will in all probability have to be laid off for the months of March and April 1951.

The letter constitutes a final attempt to avoid the temporary layoffs by appealing to the Ministry for Machine-Building for aid. Mention is made of the fact that the 1950 plan could not be fulfilled because of shortages of material, and that the plant is confronted with the same situation for 1951, although presumably for the 1st quarter only. It is pointed out that the plant prepared for the new Five-Year Plan by providing for an extensive expansion of the production program, and that valuable capacity for the production of welding electrodes, regarded as a point for emphasis within the GDR, will be wasted if the plant does not receive aid as soon as possible.

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16 July 1951

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